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# Introduction to REST APIs

Unlock the Power of REST APIs for Seamless Web Communication

DEFINITION

REST APIs are a set of rules that allow different software applications to communicate over the internet. They use standard HTTP methods to perform operations on resources.

KEY CONCEPTS

HTTP Methods

REST APIs primarily use GET, POST, PUT, and DELETE to interact with resources.

Statelessness

Each API request from a client must contain all the information needed to understand and process it.

Client-Server Architecture

REST separates the client and server, allowing them to evolve independently.

Resources

In REST, resources are the data entities that APIs expose, identified by URLs.

JSON Format

REST APIs commonly use JSON to format data, making it easy to read and write.

EXAMPLES

- GET /users retrieves a list of users.
- POST /orders creates a new order.
- DELETE /products/123 removes the product with ID 123.

MEMORY TIPS

- ★ Remember 'CRUD' for Create, Read, Update, Delete operations.
- ★ Think of REST as 'Representational State Transfer' to recall its purpose.
- ★ Use the acronym 'HTTP' to remember the methods: GET, POST, PUT, DELETE.

COMMON MISTAKES

- ✗ Confusing REST with SOAP, which is a different protocol.
- ✗ Neglecting to handle errors properly in API responses.
- ✗ Not using the correct HTTP method for the intended action.

QUICK RECAP

REST APIs enable communication between different software systems using standard HTTP methods. Key concepts include resources, statelessness, and the use of JSON for data formatting.